Functional Groups

العربية (/ar/sanitation-systems/terminology/functional-groups)

A functional group is a grouping of technologies that have similar functions. There are five different functional groups from which technologies can be chosen to build a system.

The five groups are:

User Interface (U) (/sanitation-systems/sanitation-technologies#group-u)

describes the ways the type of toilet, pedestal, pan, or urinal with which the user comes in contact; it is the way by which the user accesses the sanitation system. In many cases, the choice of User Interface will depend on the availability of water. Note that Greywater and Stormwater do not originate at the User Interface, but may be treated along with the products that originate from it.

Collection and Storage/Treatment (S) (/sanitation-systems/sanitation-technologies#group-s)

describes the ways of collecting, storing, and sometimes treating the products that are generated at the user interface. Treatment that is provided by these technologies is often a function of storage and usually passive (e.g. no energy inputs). Thus, products that are 'treated' by these technologies often require subsequent treatment before Use and/or Disposal.

Conveyance (C) (/sanitation-systems/sanitation-technologies#group-c)

describes the transport of products from one functional group to another. Although products may need to be transferred in various ways between functional groups, the longest, and most important gap is between user interface or collection and storage/treatment and (semi-) centralized treatment. Therefore, for the sake of simplicity, conveyance only describes the technologies used to transport products between these functional groups.

(Semi-) Centralized Treatment (T) (/sanitation-systems/sanitation-technologies#group-t)

Semi-) Centralized Treatment refers to treatment technologies that are generally appropriate for large user groups (i.e., neighbourhood to city level applications). The operation, maintenance, and energy requirements of technologies within this functional group are generally higher than for smaller- scale technologies at the S level. The technologies are divided into 2 groups: the first groups are primarily for the treatment of blackwater, brownwater, breywater or effluent (e.g. **biogas settlers (/sswm-university-course/module-6-disaster-situations-planning-and-preparedness/further-resources/biogas-settler)**, **ABRs (/factsheet/anaerobic-baffled-reactor-%28abr%29)**, **WSPs (/factsheet/waste-stabilisation-ponds)**, **constructed wetlands (/factsheet/free-water-surface-cw)**, whereas the second group (e.g. **planted (/factsheet/planted-drying-beds)** or **unplanted (/factsheet/unplanted-drying-beds)** drying beds, **composting (/sswm-university-course/module-6-disaster-situations-planning-and-preparedness/further-resources/%28co-%29-composting-%28large-scale%29)**, **anaerobic digestion (/arctic-wash/module-4-technology/further-resources-wastewater-treatment/anaerobic-digestion-%28small-scale%29)**) are mainly for the treatment of sludge. Technologies for **pre-treatment (/factsheet/pre-treatment-technologies)** and **post-treatment (/factsheet/disinfection-and-tertiary-filtration)** are also described.

Use and/or Disposal (D) (/sanitation-systems/sanitation-technologies#group-d)

refers to the methods by which products are ultimately returned to the environment, either as useful resources or reduced-risk materials. Furthermore, products can also be cycled back into a system (e.g., by using treated greywater for flushing).